



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,683	09/18/2003	Hiroaki Tanizaki	09792909-5673	4074

26263 7590 10/16/2006

SONNENSCHN NATH & ROSENTHAL LLP
P.O. BOX 061080
WACKER DRIVE STATION, SEARS TOWER
CHICAGO, IL 60606-1080

EXAMINER

WEINER, LAURA S

ART UNIT	PAPER NUMBER
----------	--------------

1745

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,683

Applicant(s)

TANIZAKI ET AL.

Examiner

Laura S. Weiner

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9-7-06 has been entered.

Election/Restrictions

2. Applicant's election of Group III, claims 10-18 in the reply filed on 5-3-06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. Claims 1-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5-3-06.

Response to Arguments

4. Applicant's arguments with respect to claims 10-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

5. Claims 10-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10 and 14 are rejected because it is unclear how the material can comprise Sn, CoSn₂, CoSn, Co₃Sn₂ and an alloy comprising lithium and one of the listed elements all as one particle.

Specification

6. The disclosure is objected to because of the following informalities: On page 5 of the specification, it is unclear how CoSn₂, Co₃Sn₂, FeSn₂, Cu₆Sn₅ can result from the formula 1, SnM₁x. This formula only allows for Sn₁. Appropriate correction is required.

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 103

7. Claims 10-11, 14-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bito et al. (6,265,111).

Bito et al. teaches a nonaqueous electrolyte secondary battery having an improved negative electrode. Bito et al. teaches in column 2, that the negative electrode comprises alloy particles having the formula $\text{Li}_x\text{M}_1\text{aM}_2$ where M1 can be Zr, Y, Co, etc. and M2 can be Sn, etc. It is preferable that in addition at least two phases have compositions represented by the formula (2) $[\text{M}_3\text{cm}_4]$ and the formula (3) $[\text{M}_5\text{dM}_6]$ are present. M3 and M5 represent at least one element selected from M1 [Co] and each of M4 and M6 represent at least one element selected from Group M2 [Sn]. Bito et al. teaches in column 4, lines 1-11, that preferable combination is Phase A is composed of one or more of CoSn_2 , etc. and Phase B is composed of one or more of CoSn, Co_3Sn_2 , etc. Bito et al. teaches in column 14, lines 60-64, that the positive active material can be $\text{LiMn}_{1.8}\text{Co}_{0.2}\text{O}_4$, LiMn_2O_4 , LiCoO_2 , LiNiO_2 , and the like.

Since Bito et al. teaches the same anode comprising CoSn_2 , CoSn, Co_3Sn_2 and $\text{Li}_x\text{M}_1\text{aM}_2$ where M1 is Zr or Y, then inherently Sn must also be obtained.

In addition, metallic Sn would have obviously have been present once the Bito et al. product is provided. *In re Best*, 195 USPQ 433 (CCPA 1977).

In the event any differences can be shown for the product of the product by process claims 11 and 15, as opposed to the product taught by Bito et al., such differences would have been obvious to one of ordinary skill in the art as a routine

Art Unit: 1745

modification of the product in the absence of a showing of unexpected results. *In re Thrope* 227 USPQ 964; (Fed. Cir. 1985).

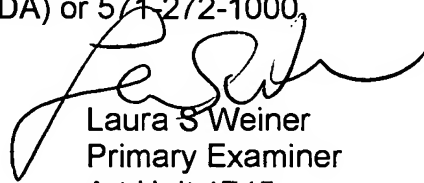
With respect to the product by process claims 11 and 15, the determination of patentability is based upon the product itself not upon the method of its production. *In re Thrope* 227 USPQ 964; *In re Brown* 173 USPQ 685; *In re Bridgeford* 149 USPQ 55; *In re Wertheim* 191 USPQ 90. Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the Examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to the Applicants to establish that their product is patentably distinct. *In re Brown* 173 USPQ 685 and *In re Fessmann* 180 USPQ 324.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Laura S Weiner
Primary Examiner
Art Unit 1745

October 11, 2006